

V. SCOLOPENDRIDAE.

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Out of the eight species collected two are new, one is only known from the E. Himalayas and Assam; but all the rest occur south and in most cases west of this area as well.

Subfamily *CRYPTOPINAE*.

Genus *Cryptops*.

C. doriae, Pocock.

Renging, 2,150 ft., 19-xii-11 (under bark).

This species has hitherto been recorded from the area between and including New Guinea and Burma. It must extend westwards right across India, however, for I recently obtained specimens from Taloshi (Satara District, Bombay) at an altitude of about 2,000 ft. in the Western Ghats.

Subfamily *OTOSTIGMINAE*.

Genus *Otostigmus*.

O. burn-murdochi, n. sp.

Upper Rotung, *ca.* 2,000 ft., Jan., 1912.

Collected by the 32nd Sikh Pioneers when roadmaking and named after Mr I. Burn-Murdoch of that regiment.

Description.—Length (apart from appendages) up to 63 mm. Antennae 19-jointed (rarely 17-jointed on one side and 19-jointed on the other, the terminal joint being present in both), the first three joints large, polished and hairless, the rest smaller and pilose. Dorsal surface of head and body dark olive green, finely and sparsely but evenly punctured throughout, the punctures on the head and first one or two segments often a trifle larger and less clearly defined than the rest; segments 3-20 with a pair of very fine and sometimes incomplete longitudinal grooves; these grooves usually more strongly impressed close to the posterior margin especially in the anterior or middle segments of the body, where they are often joined by a transverse groove between which and the posterior margin the surface may be rugose. Marginal grooves present behind segments 8-11. Anal segment

laterally with strong marginal ridges; posterior margin composed of two straight halves meeting in an angle of about 120° . Ventral surface paler than dorsal, similarly punctured, but without grooves; sternocoxal plate armed with five strong teeth (sometimes four or six on one side only). Sternum of anal segment narrower behind than in front, posterior margin more or less concave. Pseudopleural processes at least as long as sternum of anal segment, sometimes very slender behind, armed with 1-2 distal, 1-2 external, and 1-4 dorsal spinules. Tooth on inner side of femur of poison-jaws strongly developed. Legs distally of a more bluish tinge than the body. First pair of legs armed with 1 distal spine on the patella, 1 on the tibia, 2 on the proximal tarsus, and 2 at the base of the claw; second with 2 spines on the proximal tarsus and claw, with or without 1 on the tibia; third to twentieth with 2 at the base of the claw, 1, or usually in many of the anterior segments 2, at the end of the proximal tarsus; anal legs with 2 at the base of the claw only; femur of anal legs with a strong dorsal tooth on the inner side at the end ("eckdorn") with 1-3 smaller teeth behind it, beneath on the outer side with 3, on the inner with 2, 2-3, 3 teeth often irregularly arranged.

This species is allied to those grouped under the number 5 in Kraepelin's table [Revision der Scolopendriden, p. 99, in Mitt. Naturhist. Mus. Hamburg, XX, 1902 (1903)]. It differs from all of them, however, in combining the presence of external spinules on the pseudopleural processes with the absence of longitudinal grooves on the sterna.

O. insularis, Haase.

Kobo, 400 ft., 8-xii-11.

Rotung, 1,300-1,400 ft., 31-xii-11 and 1-i-12.

This species is recorded from the Seychelles, Ceylon, the Philippines, and the E. Himalayas.

Several specimens have recently been added to the Museum collection. In addition to the Abor records above noted, the following localities may be given:—

Ceylon: Kandy and Peradeniya, 1,500-2,000 ft.

E. Himalayas: Darjiling District—Ghunti, ca. 1,800 ft.

Assam: Mangaldai District—Assam-Bhutan Frontier.

Dikrang Valley.

Malay Peninsula: Penang.

Individuals differ greatly one from another in many respects. Kraepelin has pointed out that the Himalayan form differs from the Ceylon one in having only two instead of two and half segments of the antenna smooth and hairless. This is confirmed by the specimens I have seen, the Penang specimen agreeing with the Himalayan ones in this respect, but as two of the Himalayan ones have two and half segments bare on one antenna I am inclined to think he was right in not giving the two forms separate

varietal names. Great differences are also found in the size, proportions, and femur-armature of the anal legs. Our Ceylon specimens agree more or less perfectly with Kraepelin's description, but in the Himalayan ones the number of spines on the femur is commonly less and the femur as a whole is apt to be shorter; neither of these characters seems, however, to be constant nor are the shortest femora necessarily those with the fewest spines. This frequent reduction of the number of spines on the femora brings the species still nearer to *O. scaber*, Pocock, and although I have never yet seen a specimen with two tarsal spurs on the legs of less than about eighteen segments I cannot help thinking that the two will in course of time prove to be identical. The pseudopleural processes are also subject to variation, and the distinctness of the longitudinal keels, as well as the presence or absence of a pair of longitudinal grooves and the whole texture of the dorsal surface, is extraordinarily variable. The dorsal surface may be smooth and polished between the keels throughout, or may be granular or finely spinulose laterally, or finely spinulose throughout.

O. rugulosus, Por.

Sadiya, N.-E. Assam, 25-xi-11.

Kobo, 400 ft., 30-xi—3-xii-11 (rotten wood).

Rotung, 1,300 ft., 30-xii-11 (under stones).

Renging, 2,150 ft., 19-xii-11 (rotten wood).

Previously recorded only from the Seychelles, Mauritius, Andamans, Burma, and Siam. There are however also specimens in the Indian Museum collection which were recently collected by Mr. Kemp in Assam as far west as Mangaldai and the Assam-Bhutan frontier north of that district.

The extent to which the longitudinal grooves of the sterna are developed varies greatly; and in one or two of the Kobo specimens they are entirely absent.

Genus *Rhysida*, Wood.

R. nuda (Newp.).

Dibrugarh, N.-E. Assam, 17—21-xi-11.

Sadiya, N.-E. Assam, 25-xi-11.

This species occurs throughout the Oriental Region and also in Australia and Paraguay. The specimens from the Abor country are nearer *R. immarginata* (Por.) than *R. nuda* as these species are defined by Kraepelin (loc. cit., pp. 141 and 143-4), but as specimens combining the characters of the two seem to be far commoner in India than the latter and quite as common as the former, I feel unable to separate them, and Newport's name has priority over Porat's. Complete or incomplete marginal grooves are often present on several segments in front of the twenty-first, which alone has strong marginal ridges.

R. cuprea, Krpln.

Kobo, 400 ft., 30-xi—3-xii-11 (one in rotten wood and one in earth).

Balek, 600 ft., 24-iii-12.

Up to the present the only published record for this species is Bhutan. The Indian Museum has, however, recently received specimens from the following localities :—

E. Himalayas : Darjiling District—Kurseong, *ca.* 5,000 ft.; Ghumti Tea Estate, *ca.* 4,000 ft.

Assam : Sylhet—Shamshernager, *ca.* 100 ft.

This species is much nearer *R. stuhlmanni*, Krpln., and *R. petersi* (Por.) from Africa than Kraepelin supposed; for the fourth joint of the antenna is often broader than long, the first stigmata may approach an ∞ -shape, the pseudopleura may be terminated by 3 instead of 2 spines, and the nineteenth and twentieth legs may have 2 and 1 instead of 1 and 0 tarsal spurs respectively. It can be distinguished however by its 20-21-jointed antenna. In one specimen one of the antennae is only 18-jointed and has the terminal segment present, but presumably this is due to regeneration after mutilation.

Genus **Ethmostigmus**, Poc.**E. pygomegas** (Kohlr.).

Kobo, 400 ft. (rotten wood).

Upper Rotung, *ca.* 2,000 ft. (collected by M. de Courcy).

This species is found throughout the E. Himalayas, Assam, Burma and the Nicobars.

Subfamily **SCOLOPENDRINAE**.Genus **Scolopendra** (L.) Newp.**S. mazbii**, n. sp.

Upper Rotung, *ca.* 2,000 ft., Jan., 1912.

One small specimen was found under the leaf-stem of a plantain; the rest were obtained by Capt. the Hon. M. de Courcy and the 32nd Sikh Pioneers when road-making; the name chosen for the species is taken from that of the caste to which the men of this regiment belong.

Description.—Length (apart from appendages) up to 95 mm. Antennae 17-jointed, the first five joints hairless, the rest uniformly pubescent throughout. Dorsal surface of head dark bluish in front, pale greenish behind, marked with a fine longitudinal groove in the middle line. First segment also pale greenish above, with or without the fine median groove; second and third segments dark bluish with a pair of distinct longitudinal grooves;

remaining segments with the exception of the last olivaceous in front with a dark bluish band along the posterior margin¹ and a pair of distinct longitudinal grooves throughout, about half of these segments with raised lateral margins; last segment olivaceous, little darker behind than in front, entirely without paired or median grooves, lateral margins very strongly raised, posterior margin curved. Ventral surface uniformly olivaceous or with head and first segment browner or paler than the rest; sternocoxal plate armed with 5 minute and widely separated teeth, sterna of segments 2-19 or 20 with a pair of distinct longitudinal grooves; sternum of the last segment rather slender, narrower behind than in front, posterior margin straight or very nearly so. Pseudopleural processes conical, rather slender, the apex simply pointed. Tooth on inner side of femur of poison-jaws strongly developed; first pair of legs paler in colour than the rest, legs 1-19 armed with 1 tarsal and 2 claw spurs, the twentieth with 2 claw spurs and 0(-1) tarsal spurs, the anal legs usually without spurs, sometimes, however, with 1 claw-spur. Femur of anal legs armed normally with 2,2 ventral outer, 2 ventral inner, 2 dorsal inner and 1 long and always simply pointed posterior dorsal spine; the arrangement, however, is sometimes less regular than this when one or two additional spines are developed; and the proximal ventral spine is often so much reduced that it is not improbable that it may occasionally be absent. Distal tarsus of anal leg moderately slender in young specimens; much stouter proportionally in adults in which it is sometimes actually shorter than the very large claw.

This species comes next to *S. morsitans* when compared with Kraepelin's table (loc. cit., pp. 226-232), but can be distinguished therefrom at once by the simply pointed pseudopleural processes and the similarly simple posterior dorsal spine ("eckdorn") of the anal legs as well as by other minor characters.

¹ Mr. Kemp informs me that the colours were much more brilliant in life, the ground colour which is now olivaceous being then a straw-yellow.